



**FOR IMMEDIATE RELEASE**  
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Contact: Ellen Weiss  
eweiss@biophysics.org

### **Biophysical Society Announces Winners of 2017 Education Travel Awards**

Rockville, MD— The Biophysical Society has announced the winners of its Education Committee Travel Awards to attend the Biophysical Society's 61<sup>st</sup> Annual Meeting in New Orleans, Louisiana, February 11-15, 2017. The recipients of this competitive award, all of whom are students and postdoctoral fellows, are selected based on scientific merit. Each awardee will be presenting their research during the meeting, will receive a travel grant, and will be recognized at a reception on Saturday, February 11, at the Ernest N. Morial Convention Center.

The recipients of the 2017 Education Committee Travel Award, along with their institutional affiliation and abstract title, are:

Mihai Azoitei, University of North Carolina at Chapel Hill, NOVEL BIOSENSOR DESIGN REVEALS THE ROLE AND REGULATION OF GEF-H1 IN CELL MIGRATION.

Mouhanad Babi, McMaster University, THE CHARACTERIZATION OF CELLULOSE NANOSTRUCTURE USING SUPER-RESOLUTION FLUORESCENCE MICROSCOPY.

Curtis Balusek, Georgia Institute of Technology, CONSTRUCTING AN IN SILICO MODEL OF THE GRAM-NEGATIVE CELLULAR ENVELOPE.

Paola Bisignano, University of California, San Francisco, STRUCTURAL INSIGHTS INTO SODIUM-DEPENDENT SUGAR TRANSPORTERS AND THEIR INHIBITION MECHANISM.

Breane Budaitis, University of Michigan, THE ROLE OF THE COVER-NECK BUNDLE IN MULTI-MOTOR TRANSPORT AGAINST LOAD IN CELLS.

Shirley Chen, University of Michigan, ENGINEERING INHIBITABLE KINESIN-3 MOTORS BY A NOVEL CHEMICAL-GENETIC APPROACH.

Tsung-Han Chou, Iowa State University, CRYSTAL STRUCTURE OF A LOW CO<sub>2</sub> INDUCIBLE PROTEIN, LCI1 IN CHLAMYDOMONAS REINHARDTII.

Saikat Chowdhury, The Scripps Research Institute, USING CRYOEM TO UNDERSTAND HOW PHAGES EVADE BACTERIAL CRISPR DEFENSE SYSTEM.

Alexander Chu, California Institute of Technology, TOWARDS A UNIVERSAL

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CHARACTERIZATION OF THE MEMBRANE PROTEIN EXPRESSION LANDSCAPE.

Miranda Collier, University of Oxford, EVIDENCE FOR CHAPERONE FUNCTION IN MECHANOSENSATION.

Caitlin Cornell, University of Washington, DIRECT IMAGING OF LIQUID DOMAINS BY CRYOTEM IN SUBMICRON VESICLES.

Roberto Covino, Max-Planck-Institute of Biophysics, A EUKARYOTIC SENSOR FOR MEMBRANE LIPID SATURATION.

Yavuz Dagdas University of California, Berkeley, CONFORMATIONAL DYNAMICS OF CAS9 DURING DNA BINDING.

Peter Dahl, University of Michigan, A SUPPORTED TUBULATED BILAYER SYSTEM SHOWS EFFECTS OF SYNAPTOTAGMIN-7 ON MEMBRANE CURVATURE.

Russell Davidson, Colorado State University, MOLECULAR ALLOSTERY IN DENGUE NS3 HELICASE ALONG THE ATP HYDROLYSIS CYCLE.

Melody Di Bona, Italian Institute of Technology, CHROMATIN ACCESSIBILITY STUDIED BY SLOW SCAN FCS IN THE EUKARYOTIC NUCLEUS.

Andrew Dittmore, NIH, ENERGETIC CONTRIBUTIONS OF PLECTONEME TIPS AND TAILS.

Matthew Dragovich, Lehigh University, INVESTIGATION OF THE RELIABILITY OF AFM NANOINDENTATION-DERIVED MEASUREMENTS OF CELL MECHANICS.

Natasha Dudzinski, Yale University, EFFECTS OF MEMBRANE TENSION ON SNARE-MEDIATED SINGLE FUSION PORES.

Paige Engen, Hamline University, STRUCTURAL ANALYSIS OF TAU PEPTIDE INTERACTIONS WITH LIPID MEMBRANES USING FOURIER TRANSFORM INFRARED SPECTROSCOPY.

Cristian Escobar, Florida State University, CONFORMATION PLASTICITY AND PEPTIDOGLYCAN CLEAVAGE BY THE N-TERMINAL INTRINSICALLY DISORDERED DOMAIN OF CHIZ.

Gozde Eskici, University of Pennsylvania, MICROSECOND SIMULATIONS OF AMYLOID BETA FIBRIL NUCLEATION IN REVERSE MICELLES.

Emmet Francis, University of California at Davis, SINGLE-CELL INVESTIGATION OF THE ROLE OF CALCIUM BURSTS IN HUMAN IMMUNE CELLS.

Ahmed Fuwad, Inha University, AQUAPORIN BIOMIMETIC MEMBRANE FOR ENERGY CONSERVATIVE WATER DESALINATION.

Wolfgang Gross, University of Bayreuth, MACROPHAGES ARE SENSITIVE TO SUBSTRATE ELASTICITY DURING PHAGOCYTOSIS.

Shubhasis Haldar, Columbia University, TRIGGER FACTOR BOOSTS THE WORK DONE BY PROTEIN FOLDING UNDER FORCE.

Alice Herneisen, Swarthmore College, SITE-DIRECTED SPIN LABELING EPR SPECTROSCOPY OF THE CYTOPLASMIC TAIL OF INFLUENZA A M2.

Naoto Hori, University of Texas, MULTISTEP FOLDING KINETICS OF GROUP I INTRON RNA STUDIED BY  $Mg^{2+}$ -CONCENTRATION JUMP SIMULATIONS.

Jesse Howe, CSU San Marcos, EXPANDING THE SCOPE OF SINGLE MOLECULE FRET SPECTROSCOPY TOWARDS PRIMARILY UNDERGRADUATE INSTITUTIONS.

Abir Kabbani, Wayne State University, NANOSCALE MEMBRANE BUDS INDUCED BY CTXB-GM1 IN ONE COMPONENT BILAYER DETECTED BY POLARIZED LOCALIZATION MICROSCOPY (PLM).

Kalli Kappel, Stanford University, BLIND PREDICTIONS OF RNA/PROTEIN RELATIVE BINDING AFFINITIES.

Shachi Katira, University of California, Berkeley, PRE-TRANSITION EFFECTS MEDIATE FORCES OF ASSEMBLY BETWEEN TRANSMEMBRANE PROTEINS: RECENT RESULTS ON THE ORDERPHOBIC EFFECT.

Anna Koster, Stanford University, DEVELOPING A NOVEL CLASS OF CLC CHLORIDE-CHANNEL INHIBITORS.

Hema Chandra, Kotamarthi, Massachusetts Institute of Technology, SINGLE-MOLECULE DISSECTION OF THE ROLE OF DIRECTIONALITY IN PROTEIN DEGRADATION BY Clp PROTEOLYTIC MACHINES.

Sudipta Lahiri, Wesleyan University, ELUCIDATION OF THE STRUCTURE-FUNCTION RELATIONSHIP OF *S. CEREVISIAE* MUTS HOMOLOG MSH4 AND MSH5 WITH THE HOLLIDAY JUNCTION.

Ying Lai, Stanford University, MUNC13 AND MUNC18 COOPERATE TO PROPERLY ASSEMBLE SNARES FOR FAST NEUROTRANSMITTER RELEASE.

Christopher Lee, University of California, San Diego, INVESTIGATING TRANSPORT PROPERTIES WITH MULTI-SCALE COMPUTABLE MESH MODELS FROM HETEROGENEOUS STRUCTURAL DATASETS.

Soohyun Lee, University of Arizona, HYDRATION-MEDIATED ELASTIC DEFORMATIONS IN BIOLOGICAL MEMBRANES.

Maureen Leninger, New York University, INVESTIGATING THE STRUCTURE OF THE DRUG TRANSPORTER EMRE.

Alyssa Lombardi Temple University School of Medicine, GENETIC ABLATION OF FIBROBLAST MITOCHONDRIAL CALCIUM UPTAKE INCREASES MYOFIBROBLAST TRANSDIFFERENTIATION AND EXACERBATES FIBROSIS IN MYOCARDIAL INFARCTION.

Victor Pui-Yan Ma, Emory University, RATIOMETRIC TENSION PROBES FOR MAPPING RECEPTOR FORCES AND CLUSTERING AT INTERMEMBRANE JUNCTIONS.

Mohammad Mehdi Maneshi, University at Buffalo, SHEAR STRESS STIMULATED MSC ACTIVITIES: DIRECT CHANGES OF MEMBRANE TENSION OR CYTOSKELETAL STRESS?

Alexander Marras, Ohio State University, FABRICATING AND ACTUATING DNA ORIGAMI MECHANISMS.

Dipak Maskey, Institute of Medicine, DEGRADATION OF CALPONIN 2 IS REQUIRED FOR CYTOKINESIS.

Isha Mehta, Texas Woman's University, PROTEIN ENERGY NETWORK MODELS TO CLASSIFY AND PREDICT FUNCTIONALLY LINKED INTERFACES OF PROTEINS FROM FUNCTIONALLY UNCORRELATED INTERFACES.

Paula Morales, University of North Carolina at Greensboro, CONSTRUCTION OF A GPR3 HOMOLOGY MODEL USING CONFORMATIONAL MEMORIES.

Mahmoud Nasr, Harvard Medical School, COVALENTLY CIRCULARIZED NANODISCS : EM AND NMR APPLICATIONS.

Amar Parvate, Purdue University, CRYOTOMOGRAPHY OF PLEOMORPHIC VIRUSES.

Samantha Piskiewicz, UNC Chapel Hill, TARDIGRADE INTRINSICALLY DISORDERED PROTEINS AS POTENTIAL EXCIPIENTS FOR BIOLOGICS.

Medeea Popescu, Wellesley College, EXAMINING THE ROLE OF PHOSPHORYLATION ON INTERACTIONS BETWEEN THE CARDIAC POTASSIUM CHANNEL ALPHA-SUBUNITS HERG AND K<sub>v</sub>LQT1.

Dana Reinemann, Vanderbilt University, SINGLE MOLECULE CHARACTERIZATION OF MITOTIC KIF15 REVEALS CAPABILITY TO GENERATE FORCE IN ANTI-PARALLEL MICROTUBULES.

Devon Richtsmeier, Boise State University, Cu<sup>2+</sup> IONS MODULATE THE CONDUCTANCE HYSTERESIS OF LYSENIN CHANNELS.

Talant Ruzmetov, Kent State University, EXPLORING THE ROLE OF FLEXIBILITY IN BINDING KINETICS AND AFFINITY OF PKID-KIX THROUGH COARSE GRAINED SIMULATIONS.

Serzhan Sakipov, Carnegie Mellon University, ION PERMEATION MECHANISM IN TRPV6 CA<sup>2+</sup> CHANNEL.

Kristin Schimert, University of Michigan, INTRACELLULAR CARGO TRANSPORT BY SINGLE-HEADED KINESIN MONOMERS.

Digvijay Singh, Johns Hopkins University School of Medicine, INVESTIGATION OF DNA BINDING, NUCLEOLYSIS AND PRODUCT RELEASE SPECIFICITY OF RNA GUIDED ENDONUCLEASE CRISPR-CPF1 FAMILY REVEALS IMPORTANT DIFFERENCES FROM

CAS9-RNA.

Kyle Smith, Northwestern University, THE TWO GTPASE DOMAINS OF THE OUTER MITOCHONDRIAL MEMBRANE PROTEIN MIRO HAVE NOVEL ACTIVE SITE CONFORMATIONS AND DISTINCT BIOCHEMICAL PROPERTIES.

Coleman Swaim, James Madison University, BIOLOGICAL SEMICONDUCTORS: STRUCTURAL CONTROL OF HEME REDOX POTENTIALS IN PPCA, A 3-HEME CYTOCHROME.

Bryn Taylor, UC San Diego, INVESTIGATING MOLECULAR RECOGNITION AND DRUGGABILITY OF CHEMOKINE RECEPTOR CXCR4.

Tzu-Wei Tsao, University of Wisconsin-Madison, STRUCTURAL ELEMENTS GOVERNING GABA-A RECEPTOR CHANNEL ACTIVATION AND DRUG MODULATION.

Kevin Votaw, Colorado State University, INSIGHTS INTO DAMAGED BASE DETECTION BY DNA GLYCOSYLASES: A COMPUTATIONAL STUDY OF ALKD.

Andrew Wescott, University of Maryland, Baltimore, CALCIUM REGULATION OF CARDIAC BIOENERGETICS.

Kevin White, University of Central Florida, MULTIFUNCTIONAL HIGH-THROUGHPUT SINGLE-CELL ANALYSIS USING RECONFIGURABLE AMPLIFIER ARRAY.

Sienna Wong, Wayne State University, ENGINEERING OF CHIMERIC PROTEINS TO ENHANCE IMMUNOGENICITY FOR THE PRODUCTION OF HIGH-AFFINITY SPECIFIC MONOCLONAL ANTIBODIES.

Riley Workman, Duquesne University, CHARACTERIZATION OF THE CONFORMATIONAL ENSEMBLE OF POLYGLUTAMINE PEPTIDES VIA METADYNAMICS MD SIMULATIONS AND UV RESONANCE RAMAN SPECTROSCOPY.

Goli Yamini, The Catholic University of America, IMPACT OF DENDRIMER SURFACE CHEMISTRY ON ANTHRAX TOXIN CHANNEL BLOCKAGE: A SINGLE MOLECULE STUDY.

Fan Yang, University of California, Davis, RATIONAL DESIGN AND VALIDATION OF A VANILLOID-SENSITIVE TRPV2 ION CHANNEL.

Chen-Ching Yuan, University of Miami, DISTINCT LATTICE STRUCTURE ALTERATIONS IN DCM AND HCM MOUSE MODELS ASSOCIATED WITH MUTATIONS IN MYOSIN REGULATORY LIGHT CHAIN.

Rebecca Zaunbrecher, University of Washington, GENETICALLY ENGINEERED HUMAN STEM CELL-DERIVED CARDIOMYOCYTES TO STUDY THE FUNCTIONALITY OF CRONOS TITIN.

Zhenfu Zhang, University of Toronto, INTERPLAY AMONG BINDING, PHOSPHORYLATION AND DENATURATION IN DISORDERED 4E-BP2 AS PROBED BY SINGLE MOLECULE FLUORESCENCE.

Yue Zhang, Mississippi State University, MODELING THE EARLY STAGES OF AGGREGATION IN DISORDERED ELASTIN-LIKE PROTEINS.

Haiqing Zhao, University Of Maryland, PROMISCUOUS HISTONE MIS-ASSEMBLY IS ACTIVELY PREVENTED BY CHAPERONES.

Chi Zhao, University of Texas at Austin, PLASMA MEMBRANE VESICLES WITH ENGINEERED TRANSMEMBRANE PROTEIN LIGANDS FOR HIGH-AFFINITY CELL TARGETING.

*The Biophysical Society, founded in 1958, is a professional, scientific Society established to encourage development and dissemination of knowledge in biophysics. The Society promotes growth in this expanding field through its annual meeting, monthly journal, and committee and outreach activities. Its 9000 members are located throughout the U.S. and the world, where they teach and conduct research in colleges, universities, laboratories, government agencies, and industry. For more information on these awards, the Society, or the 2017 Annual Meeting, visit [www.biophysics.org](http://www.biophysics.org).*

